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January 23, 2002

Ms. Magalie Salas, Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

Re: ET Docket No. 98-153 -- Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems
Ex Parte Communication

Dear Ms. Salas:

Pursuant to Section 1.1206(a)(1) of the Commission's Rules, on behalf of XtremeSpectrum, Inc., I am electronically filing this written ex parte communication in the above-referenced proceeding.[1]

ULTRA-WIDEBAND DOES NOT POSE ANY THREAT TO PUBLIC SAFETY COMMUNICATIONS.

XtremeSpectrum responds to the ex parte letter filed on January 16, 2002, by Glen Nash, President of APCO International, an association of public-safety communications officials.

Mr. Nash raises two concerns: interference into low-power portable public safety radios below 1 GHz, including those in the 800 MHz band; and interference into GPS-based E911 systems.

XtremeSpectrum fully understands APCO's concerns, and is writing to explain why UWB poses no threat to either portable radios or E911 systems.

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[1] XtremeSpectrum, with 67 employees, conducts research in ultra-wideband communications systems as its sole business. XtremeSpectrum intends to become a ultra-wideband communications manufacturer once the Commission authorizes certification of such systems. XtremeSpectrum takes no position on ultra-wideband radar applications.

Portable radios. Between 216 and 960 MHz, where UHF and 800 MHz public safety radios operate, the Commission proposes to limit UWB emissions to 12 dB below the levels of Section 15.209.[2] That level is *less than one billionth of a watt.*[3]

For comparison, the power that one public safety licensee can leak onto another licensee's channel is 50 millionths of a watt.[4] This is a very low number, but still 50,000 times more power than UWB. In other words, a public safety licensee is at far greater risk from other public safety users than from UWB. Computers and other digital devices are permitted more power than UWB into these bands. UWB will not be a factor in performance of public safety portable radios.

E911. UWB will not interfere with GPS-based E911 systems. XtremeSpectrum proposes extremely low UWB emissions limits in the GPS band: 21 db below Part 15 levels for non-peer-to-peer communications, and 34 db below Part 15 for peer-to-peer communications. In the GPS band, UWB will operate at far lower emissions levels than any other device in the FCC rules. This makes UWB safer for E911 than any other emitter, including the hundreds of millions of computers and other digital devices in use.

For additional details on why UWB is safe for E911, please see our filing today in response to Qualcomm, Inc.

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[2] *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems*, 15 FCC Rcd 12086 at para. 39 (2000) ("NPRM").

[3] *Details*: For these frequencies, Section 15.209(a) specifies 200 uV/m at 3m, which is 12 nW. Twelve dB below that is 0.75 nW.

[4] The maximum permitted off-channel power, more than a few channels away, is the on-channel power (P) suppressed by 43 + 10 log(P). This works out to 50 uW regardless of the on-channel power. *See* 47 C.F.R. Secs. 90.210 (preamble) (table), *referring to* 47 C.F.R. Secs. 90.210(b)(3), (g)(3).

If there are questions about this submission, please call me at the number above.

Respectfully submitted

Mitchell Lazarus
Counsel for XtremeSpectrum, Inc.

cc: Chairman Michael Powell
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Commissioner Michael J. Copps
Commissioner Kevin J. Martin
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